

REMARKS

The subject matter of the various claims was commonly owned by IBM Corporation at the time the inventions covered therein were made.

There is some ambiguity in the Office Action as to the status of the claims. The cover sheet indicates that claims 3, 6, and 8 are objected to but would be allowable if rewritten, yet paragraph 5 of the Office Action indicates that claims 3, 6, and 9 are objected to. Since claim 8 is not mentioned anywhere in the Office Action but claim 9 is specifically mentioned in paragraph 1, Applicants assume that the Examiner intended to object to claims 3, 6, and 8. Applicants note that claim 8 is already in independent form and is presumably therefore allowable now. Clarification is invited.

REJECTIONS UNDER 35 U.S.C. 103

Claims 1, 5, and 9 stand rejected as unpatentable over Tetsuya in view of Takashi. Claim 2 is rejected as unpatentable over Tetsuya and Takashi further in view of Lee. Claim 4 is rejected as unpatentable over Tetsuya and Takashi further in view of Ofer. Claim 7 is rejected as unpatentable over Tetsuya and Takashi further in view of Hashimoto. Applicants respectfully traverse these rejections. Remarks below regarding independent claim 1 also apply to the other claims.

Regarding claim 1, Applicants assert that Tetsuya and Takashi, either separately or in combination, neither teach nor suggest the distinctive features of the present invention, e.g. wherein sector level check bytes for each sector are generated according to a first level of an error correction code, and block level check bytes for at least one sector in the block responsive to the sector level check bytes of at least two sectors, including the at least one sector, are generated according to at least a second level of the error correction code.

Tetsuya is directed to use with a digital video tape recorder, and Takashi teaches the selective use of different ECC correctors of various correction capability, but the cited prior art fails to teach or suggest the invention's ML-ISF-ECC binary tree check byte generation scheme, as described for example on page 7 line 11 to page 9 line 7 and claimed in claims 1 and 9. That is, the summation of the check bytes of the multiply encoded data strings makes the encoder practical, as distinct sectors cannot be made available simultaneously for byte-by-byte summation without severe performance degradation (page 10 lines 2-7). pull down

Regarding claim 2, Applicants assert that Lee does not remedy the shortcomings of the combination of Tetsuya and Takahashi by disclosing re-generating the block level check bytes for at least one sector responsive to the data bytes in error detected in each sector. Instead, Lee teaches an improved retry operation in which data blocks are actually reread from the storage device, and the reliability metrics generated during an initial read operation improve the probability of accurately detecting the retry estimated data sequence (claim 1). In contrast, the present invention seeks to minimize or avoid a retry or data recovery procedure altogether; see page 14 line 32 of the specification et seq.

Regarding claim 7, Applicants assert Hashimoto is not a valid prior art reference against the present application (which was filed after November 29, 2000) under 35 U.S.C. 103, as its subject matter and the claimed invention were, at the time of the invention, commonly owned by IBM Corporation. See MPEP 706.02(1)(I) and the AIPA (Public Law 106-113, sec. 1000(a)(9), 113 Stat. 1501A-591 (S. 1948 sec. 4807)).

All pending claims are believed to be allowable. The prior art made of record and not relied upon has been carefully considered. The Examiner is invited to call Applicants'

undersigned representative if a telephone conference will expedite the prosecution of this application.

Respectfully submitted,

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